

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION 9

IN THE MATTER OF:

Anaconda /Yerington Mine Site  
Yerington, Lyon County,  
Nevada

Atlantic Richfield Company,

Respondent

UNILATERAL ADMINISTRATIVE  
ORDER FOR INITIAL RESPONSE  
ACTIVITIES

U.S. EPA Region  
CERCLA  
Docket No. 9-2005-0011

Proceeding Under Section 106(a) of the  
Comprehensive Environmental Response,  
Compensation, and Liability Act, as  
amended, 42 U.S.C. § 9606(a)

**I. JURISDICTION AND GENERAL PROVISIONS**

1. This Unilateral Administrative Order ("Order") is issued pursuant to the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9606(a), as amended by the Superfund Amendments and Reauthorization Act of 1986, and the Small Business Liability Relief and Brownfields Revitalization Act of 2002 ("CERCLA"). The President delegated this authority to the Administrator of the United States Environmental Protection Agency ("EPA" or "Agency") by Executive Order 12580, January 23, 1987, 52 Fed. Reg. 2923, which further delegated it to the Assistant Administrator for Solid Waste and Emergency Response and to the Regional Administrators by EPA Delegation Nos. 14-14-A and 14-14-B. This authority has been duly redelegated to the Branch Chief, Superfund Division, EPA Region IX ("Branch Chief"), by delegation dated November 16, 2001.

2. This Order pertains to property located at 103 Birch Drive near Yerington, in Lyon County, Nevada, including portions of Township 13N, Range 25E, Sections 4, 5, 8, 9, 16, 17, 20, and 21 (Mount Diablo Baseline and Meridian) on the Mason Valley and Yerington United States Geologic Survey ("USGS") 7.5 minute quadrangles (the "Anaconda /Yerington Mine Site" or the "Site"). This Order requires the Respondent to conduct initial response activities and investigations described herein to abate an imminent and substantial endangerment to the public health, welfare or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Site.

3. EPA has notified the state of Nevada of this action in accordance with section 106(a) of

CERCLA, 42 U.S.C. § 9606(a). In accordance with Executive Order 12580, as amended by Executive Order 13016, and Section IV(B) of the MEMORANDUM OF UNDERSTANDING GOVERNING FEDERAL AGENCY IMPLEMENTATION OF CERCLA SECTION 106 AUTHORITY, EPA and the United States Bureau of Land Management ("BLM") have determined that EPA will exercise lead agency authority for the purpose of this Order as applicable to federal lands within the Site.

## **II. PARTIES BOUND**

4. This Order applies to and is binding on Respondent and Respondent's directors, officers, employees, agents, receivers, trustees, successors and assigns. Any change in ownership or corporate status of Respondent, including but not limited to, any transfer of assets or real or personal property, shall in no way alter Respondent's responsibilities under this Order.

5. Respondent shall ensure that its contractors, subcontractors, and representatives receive a copy of this Order and comply with this Order. Respondent shall be responsible for any noncompliance with this Order.

6. Respondent and any successor in title shall, at least thirty (30) days prior to the conveyance of any interest in real property at the Site, give written notice of this Order to the transferee and written notice to EPA of the proposed conveyance, including the name and address of the transferee. The party conveying such an interest shall require that the transferee comply with Paragraphs 27 and 28, Access to Property and Information.

## **III. DEFINITIONS**

7. Unless otherwise expressly provided herein, the terms used in this Order that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever the terms listed below are used in this Order, or in the exhibits attached hereto and incorporated hereunder, the following definitions shall apply:

a. "Days" shall mean consecutive calendar days unless expressly stated otherwise. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday or federal holiday, the period shall run until the close of business of the next working day.

b. "Working days" shall mean consecutive calendar days other than a Saturday, Sunday or federal holiday.

c. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 and by the Small Business Liability Relief and Brownfields Revitalization Act of 2002, 42 U.S.C. § 9601 et seq.

d. "Unilateral Order" or "Order" shall mean this Unilateral Administrative Order,

e. "Effective Date" shall be the date established in Section XX of this Order.

f. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

g. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300.

h. "Paragraph" shall mean a portion of this Order identified by an Arabic numeral.

i. "Respondent" shall mean the Atlantic Richfield Company.

j. "Section" shall mean a portion of this Order identified by a Roman numeral, unless otherwise stated.

k. "Site" shall mean the former Anaconda Copper Mine located at 103 Birch Drive near Yerington, Nevada in Lyon County, including portions of Township 13N, Range 25E, Sections 4, 5, 8, 9, 16, 17, 20, and 21 (Mount Diablo Baseline and Meridian) on the Mason Valley and Yerington USGS 7.5 minute quadrangles.

l. "State" shall mean the state of Nevada, and all of its political subdivisions, including the Division of Environmental Protection ("NDEP").

m. "United States" shall mean the United States of America.

#### **IV. FINDINGS OF FACT**

8. a. The Anaconda/Yerington Mine Site is an abandoned, low-grade copper mine and extraction facility located in Mason Valley, Lyon County, Nevada. The Site is located approximately two miles west of Yerington, directly off of Highway 95, at 103 Birch Drive near Yerington, Nevada in Lyon County, and includes portions of Township 13N, Range 25E, Sections 4, 5, 8, 9, 16, 17, 20, and 21 (Mount Diablo Baseline and Meridian) on the Mason Valley and Yerington USGS 7.5 minute quadrangles. The geographic coordinates are 38° 59' 53.06" North latitude and 119° 11' 57.46" West longitude. The Site occupies 3,468.50 acres of disturbed land in a rural area, bordered to the north by open fields of alfalfa and residential acreage, and to the east by Highway 95, which separates the site from the City of Yerington, Nevada. Approximately fifty percent of the Site is privately owned land, and the rest is land within the jurisdiction, custody and control of the BLM. To the south continues BLM range land, and to the west and southwest the Singatse mountains.

b. Facilities associated with mining operations at the Site include an open-pit mine, mill buildings, tailing piles, waste fluid ponds, and the adjacent residential settlement

known as Weed Heights. A network of leach vats, heap leaching pads and evaporation ponds remain throughout the Site, in addition to a lead working shop, a welding shop, a maintenance shop, two warehouses, an electro-winning plant, and an office building.

c. The Site began operation in or about 1918, originally known as the Empire Nevada Mine. In 1953, Anaconda Minerals Company ("Anaconda") acquired and began operating the Site. In or about 1977, Atlantic Richfield Company ("Atlantic Richfield") acquired Anaconda and assumed its operations at the Site. In June 1978, Atlantic Richfield terminated operations at the Site. In or about 1982, Atlantic Richfield sold its interests in the private lands within the Site to Don Tibbals, a local resident, who subsequently sold his interests with the exception of the Weed Heights community to Arimetco, Inc. ("Arimetco"), the current owner. Arimetco operated a copper recovery operation from existing ore heaps within the Site from 1989 to November 1999. Arimetco has terminated operations at the Site and is currently managed under the protection of the United States Bankruptcy Court in Tucson, Arizona.

d. During the 25-year operational period that Anaconda and Atlantic Richfield operated the Site, they removed approximately 360 million tons of ore and debris from the open pit mine, much of which now remains in tailings or leach heap piles. Anaconda and Atlantic Richfield extracted copper from the mine by two separate methods for processing copper ore, depending on the ore type. The mined ore contained copper oxides in the upper portion of the open pit and copper sulfides in a lower portion of the open pit. During on-Site milling operations, a copper precipitate was produced from the oxide ore and a copper concentrate was produced from the sulfide ore. In the first processing method, the operator would lay the copper oxide ore in leaching vats and leach out copper with sulfuric acid. The copper precipitated out after passing over iron scraps. The copper sulfide ore would be processed by crushing and concentrated by flotation, lime would be added (calcium oxide) to maintain an alkaline pH, and the resulting copper concentrate would be shipped off-Site for final processing.

The second method that Anaconda and Atlantic Richfield used to extract copper from copper oxide ore involved leaching the ore successively with a mild acid solution and kerosene in three process vats with a total 200,000 gallons. A stronger sulfuric acid solution subsequently removed copper from the kerosene solution. A final electro-winning plant plated the copper onto stainless steel sheets. The operator recirculated the acid solution from the electro-winning vats back into the leach heaps. The leach heaps currently continue to precipitate acidic fluids.

Byproducts of the milling operation were wet gangue from the sulfide ore and wet tailings and iron- and sulfate-rich acid brine from the oxide ore. Atlantic Richfield left gangue and tailings at the Site in large dumps and ponds. Atlantic Richfield evaporated the acid brine in large evaporation ponds, some of which ponds were equipped with asphalt liners, while others were unlined. Aerial photographs taken in August 1977 indicated that the disposal ponds occupied approximately 1,377 acres. The evaporation pond and the tailings piles may have leached contaminants into the ground water.

Atlantic Richfield maintained assorted tanks throughout the Site for acetylene gas,

nitrogen gas, oxygen gas, liquid nitrogen, unleaded gasoline, and diesel fuel. These materials were used on Site for vehicle maintenance and refueling.

e. In 1999, at the request of the Yerington Paiute Tribe, EPA began an evaluation of the Site to determine the effectiveness of the existing pump-back system in preventing off-Site migration of contaminated groundwater and to determine whether any domestic wells had been impacted by the Site. EPA collected groundwater samples from on-Site monitoring wells, from the Wabuska Drain, and from nearby residential and community wells, including the wells of the Yerington Paiute Tribe. In November 1999, NDEP collected additional samples to provide data to support model scoring under the Hazard Ranking System for groundwater and surface water migration pathways. Analyses of samples from the monitoring wells indicated concentrations of arsenic at 50 to 100 parts per billion ("ppb"), cadmium at 8 to 20 ppb, iron up to 1,400,000 ppb, mercury at 0.4 to 0.7 ppb, and nickel at 100 to 1200 ppb. In addition, samples from a shallow groundwater monitoring well located less than a quarter mile from the Site contained concentrations of arsenic at 60 ppb, copper at 30 ppb, and iron at 4,300 ppb. Drinking water maximum contaminant levels, for comparison, are as follows: arsenic at 50 ppb<sup>1</sup>; cadmium at 5 ppb; iron at 600 ppb; mercury at 2 ppb; and nickel at 100 ppb.

Analyses of samples from domestic and agricultural water wells indicated that concentrations of salinity and, in some instances, iron were high. Arsenic concentrations in most production wells were below or at the detection limit of 20 ppb, except at four residential wells near the northwest corner of the Site on Luzier and Locust Lanes, which exhibited arsenic concentrations from 40 to 60 ppb.

Results of surface water analyses indicated elevated concentrations of arsenic, iron, and lead immediately down gradient of the Site in the Wabuska Drain. These concentrations diminished with distance from the Site along the length of the drain.

f. EPA confirmed that over 3,000 acres of tailings with a potentially high concentration of metals remained at the Site, and that the abandoned process fluids emanating from the tailings have a low pH and contain excessive quantities of arsenic, cadmium, chromium, copper, and iron. Salts precipitating from these seeps contain even higher concentrations of such metals. Also present are radionuclides, including uranium, thorium, and radium.

g. In October 2000, EPA conducted an Expanded Site Inspection at the Site, which consisted of collecting ground water samples from six monitoring wells on and around the Site, and samples of standing water from a below ground cellar, pregnant leachate solution, tailings and leachate salts. These samples again confirmed high concentrations of contaminants, including beryllium, cadmium, chromium, lead, mercury, and selenium. The groundwater monitoring well samples revealed levels above the regulatory limits for drinking water of arsenic, beryllium, cadmium, chromium, lead, and selenium. EPA concluded from this study that toxic heavy metals exist in source materials at the Site and have contaminated groundwater. The local groundwater is

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<sup>1</sup> The maximum contaminant level for arsenic will reduce to 10 ppb in January 2006.

the sole source of drinking water for approximately 3,000 people living within four miles of the Site.

h. In November 2001, EPA obtained and analyzed surface and subsurface soil samples from within the Site and from off-Site areas that might have been affected by the Site (specifically the Yerington Paiute Colony). Off-Site sampling in these potentially affected areas revealed arsenic levels well above levels sampled in undisturbed Site areas. In this November 2001 study, EPA also assessed Site security and identified security concerns regarding the lack of maintained fencing and unauthorized access with dirt bikes and four-wheel-drive off-road vehicles.

i. In December 2003, EPA conducted a screening level gamma ray survey of the surface sediments in evaporation ponds and detected radiation levels in excess of three times background.

j. Since September 2002, Atlantic Richfield has been conducting response activities at the Site pursuant to a consent agreement with NDEP. As part of this work, since December 2003, Atlantic Richfield has been sampling domestic wells north of the mine Site and found that fifty seven wells have gross alpha radiation levels of up to seven times the regulatory limit (78.4 pCi/l) and thirty-four of those wells have uranium levels of up to four times the regulatory limit (101 ug/L). Atlantic Richfield has voluntarily provided bottled water to residents whose wells exceed the regulatory limits, and is currently providing bottled water to sixty households north of the mine. On the Yerington Paiute Reservation, where one of the tribal supply wells exceeded the regulatory limit for uranium and gross alpha radiation, Atlantic Richfield is providing bottled water to another eighty households.

k. From June through December 2004, BLM conducted a surface radiological survey of the process areas of the Site and certain other portions of the Site, and soil sampling from areas of elevated radiation. The samples indicated substantially elevated levels of radium 226 at 9,300 pico-Curies per gram (pCi/gm), which is above EPA's preliminary remediation goal ("PRG") of 3.7 pCi/gm for an industrial worker and radium 228 at 78 pCi/gm which is above EPA's PRG of 8.4 pCi/gm for an industrial worker. This survey identified areas with elevated levels exceeding PRGs for uranium and thorium radioisotopes and exposure rates as high as 5 milliREM per hour (more than two times EPA's guidance level for unrestricted property). The identified occurrence of the radiological contaminants at greater than background levels indicates that process solutions, copper ore, and potentially waste rock throughout the Site could contain disturbed or "technologically enhanced" naturally occurring radioactive materials, which may have migrated from the Site through saturated sediment, sludges, crushed and uncrushed rock, fugitive dust and precipitated solutions and be impacting surface water and groundwater.

l. Carcinogens at the Site include arsenic, chromium, the radioisotopes of uranium (uranium-234, uranium-235, and uranium-238), the radioisotopes of thorium (thorium-230 and thorium-232), and the radioisotopes of radium (radium-228 and radium-226). Aluminum, arsenic, beryllium, boron, cadmium, copper, iron, lead, manganese, mercury, molybdenum, selenium, zinc, uranium, and chloride and sulfate are toxic metal contaminants at the Site. Disturbed and

concentrated heavy metals at the Site pose threats through inhalation and ingestion that can result in neurological, kidney, and liver damage, and behavior and learning problems.

m. By agreement with NDEP, EPA has assumed the lead agency role for this Site and, on issuance of this Order, NDEP has informed EPA that it will terminate its consent agreement with Atlantic Richfield. By this Order, EPA directs Atlantic Richfield to continue response activities to mitigate the release or threat of release of hazardous substances from the Site as set forth in Section VI of this Order.

n. The Administrative Record supporting this action is available for review at the EPA Region IX offices located at 75 Hawthorne Street, San Francisco, California (94105).

## **V. CONCLUSIONS OF LAW AND DETERMINATIONS**

9. Based on the Findings of Fact set forth above, and the Administrative Record supporting this administrative action, EPA has determined that:

a. The Anaconda/Yerington Mine Site is a "facility" as defined by section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. The contaminants found at the Site, including, but not limited to, aluminum, arsenic, boron, beryllium, cadmium, copper, chromium, iron, lead, manganese, mercury, molybdenum, selenium, zinc, sulfate and the radioisotopes of uranium, thorium and radium, are "hazardous substance(s)" as defined by section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

c. Respondent is a "person" as defined by section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

d. Respondent Atlantic Richfield Company was an owner and operator of the facility, as defined by section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of section 107(a)(2) of CERCLA, 42 U.S.C. Section 9607(a)(2). Respondent is liable under section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

e. Hazardous substances at the Site were "disposed" within the meaning of section 107(a)(2) during the time that Atlantic Richfield owned and operated the Site. These hazardous substances have left conditions at the Site as described above in the Findings of Fact that constitute an actual or threatened "release" of a hazardous substances from the Site as defined by section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

f. The conditions at the Site constitute a threat to public health or welfare or the environment based on consideration of the factors stated in the NCP at 40 C.F.R. § 300.415(b).

g. The actual or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health, welfare, or the environment within the meaning of section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

h. The response actions required by this Order are necessary to protect the public health, welfare, or the environment, and are not inconsistent with the NCP and CERCLA.

## **VI. ORDER**

10. Based on the foregoing Findings of Fact, Conclusions of Law, Determinations, and the Administrative Record for this Site, EPA hereby orders that Respondent comply with the following provisions, including, but not limited to, all documents incorporated by reference into this Order, and all schedules and deadlines in this Order, attached to this Order, or incorporated by reference into this Order, and perform the following actions:

### **11. Notice of Intent to Comply**

Respondent shall notify EPA Remedial Project Manager ("RPM") James Sickles within fourteen (14) days after the Effective Date of this Order of Respondent's irrevocable intent to comply with this Order. The Notice of Intent to Comply may be given verbally but shall be followed by written confirmation within five (5) days.

### **12. Designation of Contractor, Project Coordinator, and On-Scene Coordinator**

Respondent shall retain a contractor qualified to perform the work required pursuant to this Order. Respondent shall notify EPA of the name and qualifications of such contractor within three (3) business days after Respondent provides financial assurance under Section IX of this Order. Respondent also shall notify EPA of the name and qualifications of any other contractor(s) or subcontractor(s) retained to perform the work under this Order at least one (1) day prior to commencement of such work. EPA retains the right to disapprove of any, or all, of the contractors or subcontractors retained by the Respondent. If EPA disapproves of a selected contractor, Respondent shall retain a different contractor and shall notify EPA of that contractor's name and qualifications within three (3) business days following EPA's disapproval.

13. Within fourteen (14) days after Respondent provides financial assurance under Section IX of this Order, the Respondent shall designate a Project Coordinator who shall be responsible for administration of all the Respondent's actions required by the Order. Respondent shall submit the designated coordinator's name, address, telephone number, and qualifications to EPA. To the greatest extent possible, the Project Coordinator shall be present on-Site or readily available during Site work. EPA retains the right to disapprove of any Project Coordinator named by the Respondent. If EPA disapproves of a selected Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name and qualifications within one (1) business day following EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by Respondent.

14. The EPA has designated James Sickles of the Region 9 Superfund Division as its RPM. Respondent shall direct all submissions required by this Order and the incorporated Scope of Work to the RPM at:

James Sickles, Remedial Project Manager



Superfund Division, Site Cleanup Branch, SFD-8-2  
EPA, Region 9  
75 Hawthorne Street  
San Francisco, CA 94105  
(415) 972-3265  
sickles.james@epa.gov

**15. Work to Be Performed**

Respondent shall perform, at a minimum, all actions identified in or incorporated into this Order. The required actions have been previously provided to Atlantic Richfield by NDEP on September 1, 2004, in the "MOU Agencies Action Plan, Yerington Mine Site, Dated August 17, 2004," or are a continuation of ongoing response actions, monitoring, data collection and maintenance activities specifically required under: (1) the 1985 NDEP Administrative Order to Anaconda Minerals Company; (2) the March 28, 2002 Memorandum of Understanding between NDEP, EPA and BLM and the associated Scope of Work; and (3) the October 24, 2002 Administrative Order on Consent between NDEP and Atlantic Richfield Company. The actions to be implemented generally include, but are not limited to, the following:

**a. Establish and Maintain Site Security.** Prepare a work plan to establish and maintain appropriate Site security and warning signs after an assessment of existing Site security conditions, and notification of security concerns to local and BLM law enforcement. Provide a schedule for the implementation of the work plan and provisions for ongoing operation and maintenance of the Site security.

**b. Evaluate Health and Safety Protocols Addressing Radiological Contaminants for Site Workers.** Based on the radiological screening conducted by BLM in support of the preparation of a BLM personnel health and safety plan for the Site, or a determination of comparable protectiveness in those Atlantic Richfield health and safety plans already prepared as a requirement for access onto BLM land at the Site, Respondent is required to prepare an adequate health and safety plan for radiological contaminants during Site activities. On November 23, 2004, Respondent provided the "Radiological and Chemical Exposure Control Plan for the Yerington Mine Site, Site Investigation Operations in Lyon County." Respondent may rely on this plan to satisfy the requirements of this Paragraph, but changing field conditions may require subsequent revision. This plan may be incorporated into the general Health and Safety Plan required in Paragraph 22.

**c. Implement Ambient Air Monitoring for Radiological Contaminants both in the Process Areas and on the Site Perimeter.** Prepare a plan for ambient air monitoring of radiological contaminants in the process area of the Site and at the Site perimeter. Respondent may satisfy this requirement through the existing "Draft Air Quality Monitoring Work Plan for the Yerington Mine Site," dated December 21, 2004, as conditionally approved on January 18, 2005; however, this plan shall be revised to address newly discovered or changed Site conditions.

**d. Implement Radiological Survey of Site and Adjacent Off Site Areas.** Prepare a work plan for assessing currently available radiological data for the Site, including

radiological data in the administrative record for this Site collected by EPA, BLM and Respondent's preliminary data from the current Process Areas investigation. The assessment should conform to proper radiation investigation protocols outlined in the "Multi-Agency Radiation Survey and Site Investigation Manual" ("MARSSIM") EPA402-R-97-016/NUREG-1575 and recommend appropriate investigative techniques and methodologies for such an assessment with a schedule and responsibilities for assessing the Site and adjacent areas north, east, south and west of the Site to assess exposure pathways and areas of contamination. Appropriate assessment techniques may include aerial radiological surveys or walkover surveys by carts or all terrain vehicles that provide the equivalent of a 100% survey in accordance with MARSSIM. A complete exposure pathway assessment must assess: (1) nature and extent of the radionuclide contaminated fugitive dust pathway; and (2) past off-Site uses of mine materials potentially contaminated with radionuclides, accompanied with record searches and interviews of past mine employees or community members, potentially with EPA support. Assessment of areas of contamination must survey areas: (a) representing ambient levels; (b) areas where mine materials may have been used for grading or construction; and (c) areas where mine materials such as sediments, process solutions, and waste rock may have migrated either by surface runoff or as fugitive dust.

**e. Prepare an Interim Operations and Maintenance Plan and Continue Ongoing Response Action, Monitoring, Data Collection and Maintenance Activities** established in the 1985 NDEP Administrative Order, specifically: (1) Maintain Active Pump-back Interceptor System and Associated Evaporation System for the Site; (2) Continue Quarterly Groundwater Monitoring for Modified NDEP Profile 1 analytes; and (3) Continue Annual Domestic Well Monitoring for NDEP Profile 2 analytes. The Interim Operations and Maintenance Plan may be coordinated and integrated with the Arimetco Heap Leach Water Management activities as described in Paragraph 15(g).

**f. Continue Ongoing Field Activities, Monitoring, Data Collection and Maintenance Activities** established in the March 28, 2002 Memorandum of Understanding between NDEP, EPA and BLM and associated Scope of Work, specifically, continue to implement the ongoing (1) Process Areas Investigation Work Plan, approved May 15, 2004; (2) quarterly sampling of domestic wells for radiological contaminants; (3) provision of bottled water on request for those domestic and tribal supply wells reasonably within the extent of groundwater contamination from the Site that exceed Maximum Contaminant Levels until interim mitigation measures are approved; and (4) implement Hydrogeologic Data Gaps Investigation North of Mine Site Work Plan following review and approval of work plan.

**g. Continue Ongoing Field Activities, Monitoring, Data Collection and Maintenance Activities** established through the October 24, 2002 Administrative Order on Consent between NDEP and Atlantic Richfield, specifically maintaining the Arimetco Heap Leach Water Management Activities and related costs, including without limitation necessary utilities, equipment and service purchases, and remedial dust control.

#### **16. Work Plan and Implementation**

Within thirty (30) days after EPA approval of Respondent's proposed contractor and

project manager, Respondent shall submit to EPA for approval a Site general work plan for performing the actions set forth in Paragraph 15(a) - (c). The Site security plan shall provide a description of, and an expeditious schedule for, the action required by this Order.

17. EPA may approve, disapprove, require revisions to, or modify the Site general work plan. If EPA requires revisions, Respondent shall submit a revised Site general work plan within fifteen (15) days of receipt of EPA's notification of the required revisions. Respondent shall implement the Site general work plan as finally approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Site security plan, the schedule, and any subsequent modifications shall be fully enforceable under this Order. Respondent shall notify EPA at least forty-eight (48) hours prior to performing any on-Site work pursuant to the EPA approved plan.

18. Within thirty (30) days after EPA approval of the Site general work plan, Respondent shall submit to EPA for approval a Site Wide and Adjacent Off Site Areas Radiological Assessment Work Plan for performing the actions set forth in paragraph 15(d). The Site Wide and Adjacent Off Site Areas Radiological Assessment Work Plan shall provide a description of, and an expeditious schedule for the included actions.

19. EPA may approve, disapprove, require revisions to, or modify the Site Wide and Adjacent Off Site Areas Radiological Assessment Work Plan. If EPA requires revisions, Respondent shall submit a revised Site Wide and Adjacent Off Site Areas Radiological Assessment Work Plan within fifteen (15) days of receipt of EPA's notification of the required revisions. Respondent shall implement the plan as finally approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Site Wide and Adjacent Off Site Areas Radiological Assessment Work Plan, the schedule, and any subsequent modifications shall be fully enforceable under this Order. Respondent shall notify EPA at least forty-eight (48) hours prior to performing any on-Site work pursuant to the EPA approved work plan. Respondent shall not commence or undertake actions pursuant to the Site Wide and Adjacent Off Site Areas Radiological Assessment Work Plan without prior EPA approval.

20. Within thirty (30) days after EPA approval of the Site Wide and Adjacent Off Site Areas Radiological Assessment Work Plan, Respondent shall submit to EPA for approval an Interim Operations and Maintenance Plan for performing the response actions set forth in paragraph 15(e). The Interim Operations and Maintenance Plan shall provide a description of, and an expeditious schedule for, the action required by this Order.

21. EPA may approve, disapprove, require revisions to, or modify the Interim Operations and Maintenance Plan. If EPA requires revisions, Respondent shall submit a revised Interim Operations and Maintenance Plan within fifteen (15) days of receipt of EPA's notification of the required revisions. Respondent shall implement the plan as finally approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Interim Operations and Maintenance Plan, the schedule, and any subsequent modifications shall be fully enforceable under this Order. Respondent shall notify EPA at least forty-eight (48)

hours prior to performing any on-Site work pursuant to the EPA approved Work Plan. Respondent shall not commence or undertake any interim response actions at the Site without prior EPA approval.

## 22. Health and Safety Plan

Within three (3) days after Respondent provides financial assurance under Section IX of this Order, Respondent shall provide to EPA a Health and Safety Plan that ensures the protection of the public health and safety during performance of on-Site work under this Order. The Health and Safety Plan must be prepared in accordance with "EPA's Superfund Standard Operating Safety Guide," dated June 1992, and comply with all current Occupational Safety and Health Administration regulations applicable to Hazardous Waste Operations and Emergency Response, 29 C.F.R. Part 1910, which may consider health and safety requirements pursuant to 29 C.F.R. § 1910.120(b) and (e)(3), medical surveillance requirements pursuant to 29 C.F.R. § 1910.120(f), and a respiratory protection program. Respondent shall incorporate all changes to the Health and Safety Plan recommended by EPA and implement the Health and Safety Plan throughout the performance of the work pursuant to this Order.

## 23. Quality Assurance and Sampling

All sampling and analyses performed pursuant to this Order shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control (QA/QC), data validation and chain of custody procedures. Respondent shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with the appropriate EPA guidance. Respondent shall use the following documents as appropriate as guidance for QA/QC and sampling: "EPA Guidance for Quality Assurance Project Plans (EPA QA/G-5)"; "Preparation of a U.S. EPA Region 9 Field Sample Plan for EPA-Lead Superfund Projects (Document Control No.: 9QA-05-93)"; and "Guidance for the Data Quality Objectives Process (EPA QA/G-4)." The Respondent has submitted a Quality Assurance Project Plan on September 19, 2004, which has been approved by EPA but may be amended to provide for response activities presently unaddressed.

24. On request by EPA, Respondent shall have a laboratory analyze samples submitted by EPA for quality-assurance monitoring. Respondent shall provide to EPA the QA/QC procedures followed by all sampling teams and laboratories performing data collection or analysis.

25. On request by EPA, Respondent shall allow EPA or its authorized representatives to take split or duplicate samples of any samples collected by Respondent while performing actions under this Order. Respondent shall notify EPA not less than two (2) days in advance of any sample collection activity. EPA shall have the right to take any additional samples that it deems necessary.

## 26. Final Report

Within thirty (30) days after completion of each response action plan under this Order, Respondent shall submit for EPA review and approval a final report summarizing the actions taken in accordance with that plan to comply with this Order. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP.

**27. Access to Property and Information**

Respondent shall provide or obtain access to the Site and off-Site areas to which access is necessary to implement this Order, and provide access to all records and documentation related to the conditions at the Site and the action conducted pursuant to this Order. Such access shall be provided to EPA employees, contractors, agents, consultants, designees, and representatives. These individuals shall be permitted to move freely at the Site and appropriate off-Site areas in order to conduct actions that EPA determines to be necessary. Respondent shall submit to EPA, on receipt, the results of all sampling or tests and all other data generated by Respondent's contractors or on the Respondent's behalf during implementation of this Order.

28. Where action under this Order is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements within the time necessary to conduct any work required by this Order, or as otherwise specified in writing by the RPM. Respondent shall immediately notify EPA if, after using its best efforts, it is unable to obtain such agreements. Respondent shall describe in writing its efforts to obtain access. EPA may then assist Respondent in gaining access to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate. EPA reserves the right to seek reimbursement from Respondent for all costs and attorney's fees incurred by the United States in obtaining access for Respondent.

**29. Record Retention, Documentation, Availability of Information**

Respondent shall preserve all documents and information relating to work performed under this Order, or relating to the hazardous substances found on or released from the Site, for four years following completion of the response actions required by this Order. At the end of this four year period and 30 days before any document or information is destroyed, Respondent shall notify EPA that such documents and information are available to EPA for inspection, and on request, shall provide the originals or copies of such documents and information to EPA. In addition, Respondent shall provide documents and information retained under this Section at any time before expiration of the four year period at the written request of EPA.

30. Respondent may assert a business confidentiality claim pursuant to 40 C.F.R. § 2.203(b) with respect to part or all of any information submitted to EPA pursuant to this Order, provided such claim is allowed by section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7). If no such claim accompanies the information when it is received by EPA, EPA may make it available to the public without further notice to Respondent.

**31. Off-Site Shipments**

All hazardous substances, pollutants or contaminants removed off-Site pursuant to this Order for treatment, storage, or disposal shall be treated, stored, or disposed of at a facility in compliance with 42 U.S.C. § 9621(d)(3), 40 C.F.R. § 300.440 and the EPA "Revised Procedures for Implementing Off-Site Response Actions," (OSWER Directive 98343.11, November 13, 1987).

**32. Compliance With Other Laws**

Respondent shall undertake all actions required by this Order in accordance with the requirements of all applicable or relevant and appropriate local, state, and federal laws and regulations, as required at 40 C.F.R. § 300.415(j), unless an exemption from such requirements is specifically provided under CERCLA or unless Respondent obtains a variance or exemption from the appropriate governmental authority.

**33. Emergency Response and Notification of Releases**

If any incident, or change in Site conditions, during the actions conducted pursuant to this Order causes or threatens to cause an additional release of hazardous substances from the Site or an endangerment to the public health, welfare, or the environment, the Respondent shall immediately take all appropriate action. The Respondent shall take these actions in accordance with all applicable provisions of this Order, including, but not limited to the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondent also shall immediately notify the RPM of the incident or Site conditions. If Respondent fails to take action, then EPA may respond to the release or endangerment and reserve the right to pursue cost recovery.

34. In addition, in the event of any release of a hazardous substance, Respondent shall immediately notify the EPA Region IX Emergency Response Center at (800) 300-2193 or the National Response Center at (800) 424-8802. Respondent shall submit a written report to EPA within seven (7) days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, not in lieu of, reporting under CERCLA Section 103(c) and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. Sections 11001 et seq.

**VII. AUTHORITY OF THE EPA REMEDIAL PROJECT MANAGER**

35. The RPM shall be responsible for overseeing the proper and complete implementation of this Order. The RPM shall have the authority vested in an RPM by the NCP, 40 C.F.R. § 300.120, including the authority to halt, conduct, or direct any action required by this Order, or to direct any other removal action undertaken by EPA or Respondent at the Site. Absence of the RPM from the Site shall not be cause for stoppage of work unless specifically directed by the RPM.

36. EPA and the Respondent shall have the right to change their designated RPM or Project Coordinator. EPA shall notify the Respondent, and Respondent shall notify EPA, two (2) days before such a change is made. Notification may initially be made orally, but shall be followed promptly by written notice.

**VIII. ENFORCEMENT: PENALTIES FOR NONCOMPLIANCE**

37. Violation of any provision of this Order may subject Respondent to civil penalties of up to thirty two thousand five hundred dollars (\$32,500) per violation per day, as provided in

section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1). Respondent also may be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such violation, as provided in section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Should Respondent violate this Order or any portion hereof, EPA may carry out the required actions unilaterally, pursuant to section 104 of CERCLA, 42 U.S.C. § 9604, or may seek judicial enforcement of this Order pursuant to section 106 of CERCLA, 42 U.S.C. § 9606.

#### **IX. ASSURANCE OF ABILITY TO COMPLETE WORK**

38. Respondent shall demonstrate its ability to complete the work required by this Order and to pay all claims that arise from the performance of the work by obtaining and presenting to EPA within five (5) working days after the Effective Date of this Order, one of the following: (1) a performance bond; (2) a letter of credit; (3) a guarantee by a third party; or (4) financial information to allow EPA to determine that Respondent has sufficient assets available to perform the work. Respondent shall demonstrate financial assurance in an amount no less than five million dollars (\$5,000,000). If Respondent seeks to demonstrate its ability to complete the required work by means of financial information or by guarantee of a third party, it shall re-submit such information annually, on the anniversary of the Effective Date of this Order. If EPA determines that such financial information is inadequate, Respondent shall, within two (2) days after receipt of EPA's notice of determination, obtain and present to EPA for approval one of the other three forms of financial assurance listed above.

#### **X. REIMBURSEMENT OF OVERSIGHT COSTS**

39. The Respondent shall reimburse EPA, on written demand, for all response costs incurred by the United States in overseeing Respondent's implementation of the requirements of this Order, unless otherwise exempted from this requirement by federal law. EPA may submit to Respondent on a periodic basis a bill for all response costs incurred by the United States with respect to this Order. Respondent shall, within thirty (30) days of receipt of the bill, remit by cashier's or certified check for the amount of those costs made payable to the "Hazardous Substance Superfund," to the following address:

U.S. Environmental Protection Agency  
Cincinnati Accounting Operations  
Attention: Region 9 Receivables  
Anaconda Copper/Yerington Mine Site  
P.O. Box 371099M  
Pittsburgh, PA 15251

Respondent shall send a cover letter with any check and the letter shall identify the Anaconda/Yerington Mine Site by name and make reference to this Order, including the EPA docket number. Respondent shall send notification of any amount paid, including a photocopy of the check, simultaneously to the EPA RPM.

40. Interest at the rate established under section 107(a) of CERCLA shall begin to accrue on the unpaid balance from the day of the original demand notwithstanding any dispute or objection to any portion of the costs.

## **XI. RESERVATION OF RIGHTS**

41. Except as specifically provided in this Order, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring the Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law. EPA reserves the right to bring an action against Respondent under section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order or the Site and not reimbursed by Respondent.

## **XII. OTHER CLAIMS**

42. By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent. The United States or EPA shall not be deemed a party to any contract entered into by the Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Order.

43. This Order does not constitute a pre-authorization of funds under section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2).

44. Nothing in this Order shall constitute a satisfaction of or release from any claim or cause of action against the Respondent or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or the common law, including, but not limited to, any claims of the United States for costs, damages and interest under section 106(a) and 107(a) of CERCLA, 42 U.S.C. §§ 9606(a) and 9607(a).

## **XIII. MODIFICATIONS**

45. In the event of unanticipated or changed circumstances at the Site, Respondent shall notify the EPA RPM by telephone within twenty-four (24) hours of discovery of the unanticipated or changed circumstances. This verbal notification shall be followed by written notification postmarked no later than within three (3) days of discovery of the unanticipated or changed circumstances.

46. EPA may determine that in addition to tasks addressed herein, additional work may be required to address unanticipated or changed circumstances at the Site. Where consistent with



Section 106(a) of CERCLA, EPA may direct, as an amendment to this Order, that Respondent perform such tasks in addition to those required herein. Respondent shall implement the additional tasks that EPA identifies. The additional work shall be completed according to the standards, specifications, and schedules set forth by EPA in any modifications to this Order.

47. Modifications to any plan or schedule may be made in writing by the RPM or at the RPM's oral direction. If the RPM makes an oral modification, it will be memorialized in writing soon thereafter; provided, however, that the effective date of the modification shall be the date of the RPM's oral direction.

48. If the Respondent seeks permission to deviate from any approved plan or schedule, Respondent's Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis.

49. No informal advice, guidance, suggestion, or comment by EPA regarding reports, plans, specifications, schedules, or any other writing submitted by the Respondent shall relieve Respondent of its obligations to obtain such formal approval as may be required by this Order, and to comply with all requirements of this Order unless the Order is formally modified.

#### **XIV. DELAY IN PERFORMANCE**

50. Any delay in the performance of any requirement of this Order that, in the EPA's sole judgment and discretion, is not properly justified by Respondent under the terms of this Section shall be considered a violation of this Order. Any delay in performance of any requirement of this Order shall not affect any other obligation of Respondent under the terms and conditions of this Order.

51. Respondent shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to the EPA RPM within twenty-four (24) hours after Respondent first knew or should have known that a delay might occur. Respondent shall adopt all reasonable measures to avoid or minimize any such delay. Within three (3) days after notifying EPA by telephone, the Respondent shall provide written notification fully describing the nature of the delay, any justification for delay, any reason why the Respondent should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Increased costs or expenses associated with implementation of the activities called for in this Order are not justifications for any delay in performance.

52. If Respondent is unable to perform any activity or submit any document within the time required under this Order, the Respondent may, prior to the expiration of the time, request an extension of time in writing. The extension request shall include a justification for the delay. The submission of an extension request shall not itself affect or extend the time to perform any of Respondent's obligations under this Order.

## **XV. NOTICE OF COMPLETION**

53. When EPA determines after reviewing the Final Report, that all response actions have been fully performed in accordance with this Order, EPA will provide notice to the Respondent. If EPA determines that any response actions have not been completed in accordance with this Order, EPA will notify the Respondent, provide a list of the deficiencies, and require that Respondent modify the relevant work plan to address such deficiencies. The Respondent shall implement the modified and approved work plan and shall submit a modified Final Report in accordance with the EPA notice. Failure by Respondent to implement the approved modified work plan shall be a violation of this Order.

## **XVI. ACCESS TO ADMINISTRATIVE RECORD**

54. The Administrative Record supporting this Order is available for review at EPA's Superfund Records Center located at 75 Hawthorne Street, San Francisco, California, which may be contacted at (415) 536-2000.

## **XVII. OPPORTUNITY TO CONFER**

55. Within three (3) days after receiving this Order, Respondent may request a conference with EPA. Any such conference shall be held within two (2) days after the request unless extended by agreement of the parties. At any conference held pursuant to the request, Respondent may appear in person or be represented by an attorney or other representative.

56. If a conference is held, Respondent may present any information, arguments or comments regarding this Order. Regardless of whether a conference is held, Respondent may submit any information, arguments or comments in writing to EPA within two (2) days after the effective date of this Order. This conference is not an evidentiary hearing, does not constitute a proceeding to challenge this Order, and does not give Respondent a right to seek review of this Order. Requests for a conference, or any written submission under this paragraph, shall be directed to Assistant Regional Counsel at the following address:

J. Andrew Helmlinger  
US EPA  
Office of Regional Counsel (ORC-3)  
75 Hawthorne Street  
San Francisco, California 94105  
415-972-3904  
helmlinger.andrew@epa.gov

## **XVIII. INSURANCE**

57. Respondent shall submit to EPA a certification that Respondent or its contractor(s) and subcontractor(s) have adequate insurance coverage or other ability, subject to approval of EPA, to compensate for liabilities for injuries or damages to persons or property that may result

from the activities to be conducted by or on behalf of Respondent pursuant to this Order. Adequate insurance shall include comprehensive general liability insurance and automobile insurance with limits of one million dollars, combined single limit. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering the same risks but in a lesser amount, then the Respondent need provide only that portion of the insurance described above that is not maintained by such contractor or subcontractor. Respondent shall ensure that such insurance is maintained for the duration of performance of the work required by this Order. Respondent also shall ensure that the United States is named as an additional insured on any such insurance policies.

**XIX. SEVERABILITY**

58. If a court issues an order that invalidates any provision of this Order or finds that Respondent has sufficient cause not to comply with one or more provisions of this Order, Respondent shall remain bound to comply with all provisions of this Order not invalidated or determined to be subject to a sufficient cause defense by the court's order.

**XX. EFFECTIVE DATE**

59. This Order shall be effective three (3) days after any Respondent receives the Order, unless a conference is requested as provided herein. If such a conference is requested, this Order shall be effective the second (2nd) day following the day of such conference unless modified in writing by EPA.

Unilateral Administrative Order 9-2005-0011

IT IS SO ORDERED:

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY

By: 

Kathleen Johnson  
Branch Chief, Response, Planning and Assessment Branch  
EPA, Region 9

Date: 3/31/05

EPA Region 9 Contacts:

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75 Hawthorne Street  
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